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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,736	07/15/2003	Klaus Hilbig	CM2503RQ	7027

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THE PROCTER & GAMBLE COMPANY
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EXAMINER

FORTUNA, JOSE A

ART UNIT	PAPER NUMBER
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1731

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/27/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary	Application No. 10/619,736	Applicant(s) HILBIG ET AL.	
	Examiner José A. Fortuna	Art Unit 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 12 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The claim does not further limit claim 8, because claim 8 is not drawn to a Tissue paper, but to a method of making tissue.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 10-11 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Wells, US Patent No. 3,414,459.

Regarding claims 10-11, Wells teaches a tissue paper comprising multiple plies in which the plies are embossed with embossing rolls having from 16 to 400 protuberances/elements per square inch, (2.48 to 62 protuberances/elements per square centimeters), column 5, lines 62-65, and then calendered by passing it through a calender nip at lineal pressures between 0.5 to 60 pounds per lineal inch, (0.876 N/cm to 105.1 N/cm), column 5, lines 43-61. In column 5, lines 14-17, Wells teach that a third ply can be interposed between the two embossed plies. Wells teach that the height of the embossing elements is between 0.01 to 0.04 inch, (0.254 mm to 1.02 mm), which falls

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within the claimed range. Wells in column 3, lines 64 through 66, teaches that the web is embossed by passing it through a nip between an steel roll, (the hard roll) and an rubber covered roll, (the rubber material roll). Regarding claims 6 and 8, Wells teaches that the web is formed by embossing at least two plies then laminating said at least two plies and then calendering the embossed-laminated plies, column 1, lines 51-55 and column 5, lines 6-16. Even though the step of cutting is not explicitly recited, the tissues need to be cut in order to the desired consumer product, i.e., paper towel, facial tissues, toilet tissues, etc., therefore, this limitation is inherent to the process of the cited reference, Wells.

Claims 10-11 are product by process claims and Wells tissues seems to be similar to the ones claimed, since they embossed/calendered single and/or multiplies tissues embossed and calendered at the same levels as claimed. In the event any differences can be shown for the product -by-process claims 10-12 as opposed to the product taught by the reference Wells such differences would have been obvious to one of ordinary skill in the art as routine modification of the product in the absence of a showing unexpected results, see *In re Thorpe*, 227 USPQ 964 (CAFC 1985).

As the afore mentioned claims are product by process claims, it is deemed that "[A]ny difference imparted by the product by process claims would have been obvious to one having ordinary skill in the art at the time the invention was made because where the examiner has found a substantially similar product as in the applied prior art the burden of proof is shifted to the applicants to establish that their product is patentably distinct, ..." *In re Brown*, 173 U.S.P.Q. 685, and *In re Fessmann*, 180 U.S.P.Q. 324.

Further, "[P]rocess limitations are significant only to the extent that they distinguish the claimed product over the prior art product." *In re Luck*, 177 U.S.P.Q. 523 (1973).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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6. Claims 1-3, 5-9, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wells, cited above with or without (Kamps et al., US Patent No. 5,702,571 or Brown et al., US Patent No. 5,693,403)

Wells does not teach the size of the elements as claimed. However, he teaches that the size of the protuberances is between 0.010 to 0.040 inch (0.127-.889 mm), see column 4, lines 53-60, which would indicate to one of ordinary skill in the art that the heights of the elements could be within the range of the protuberance, which at the same time are within the claimed range. Moreover, both Kamps et al and Brown et al. teach that embossing with reduced elements height and the benefits of using such elements:

- Kamps et al., US Patent No. 5,702,571, teaches using reduced height elements between 0.25 mm to 2.5 mm, see paragraph bridging columns 3 and 4 and teaches the advantages of using such heights along with embossing elements having embossing rolls having high density of elements, i.e., in the same range as claimed, at least 30 embossing elements per square inch. Kamps et al teach the advantages in the paragraph bridging columns 1 and 2, reproduced below:

“It has now been discovered that a strong, soft and bulky tissue sheet of premium quality can be produced from basesheets made with conventional tissue making assets, although the method of this invention can also be used to improve premium quality basesheets as well. (As used herein, a tissue "basesheet" is a tissue sheet as produced on a tissue machine and wound up, prior to any post treatment such as the embossing method of this invention. The tissue basesheet can be layered or blended, creped or uncreped. A tissue "sheet" is a single-ply

sheet of tissue, which can be a tissue basesheet or a post-treated tissue basesheet.

A tissue "product" is a final product consisting of one or more tissue sheets.) A premium quality tissue sheet has a Strength (hereinafter defined) of 500 grams or greater, a Bulk (hereinafter defined) of 6 cubic centimeters per gram or greater, and a softness, as measured by the Specific Elastic Modulus (hereinafter defined) of 4 or less. The invention utilizes a debonding method in which fine-scale, discrete, intermeshing embossing elements of two gendered (male and female) embossing rolls inelastically strain the tissue sheet, thereby rupturing the weak bonds and opening up the structure both internally and externally. When the method of this invention inelastically strains the sheet externally, the sheet has increased surface fuzziness, which can improve softness. When the method of this invention inelastically strains the sheet internally, the sheet is more limp (less stiff) with a lower Specific Elastic Modulus (increased softness) and significantly greater Bulk. In most cases, the Strength of the sheet is substantially unaffected. Depending on the properties of the sheet to which the method of this invention is applied, the resulting product will have different characteristics, but will always be improved in terms of softness and Bulk, preferably without significant loss of Strength."

- Brown teaches that reduced height elements, heights between 0.005 to 0.035 inch are desirable since it the embossed sheet can be wound into the required roll size with less tension on the sheet, such that the embossing pattern of the tissue remains well defined, see abstract.

Therefore, embossing the tissues as taught by Kamps et al. and/or Brown et al. would have been obvious to one of ordinary skill in the art in order to obtain the advantages discussed above. Also Wells fails to teach the Lineal Pressure at the calendering. However, optimizing a result effective variable would have been obvious to one of ordinary skill in the art absent a showing of unexpected results. It has been held that “[T]he discovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art. *In re Antoine*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); *In re Aller*, 42 CCPA 824, 220 F.2d 454, 105 USPQ 233 (1995).

Wells does not teach the use of a lotion in the tissue. However, the use of lotions¹, emollients and other additives in tissues is conventional in the art and therefore, the use of lotion would have been obvious to one of ordinary skill in the art.

7. Claims 1-3, and 5-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jennings et al., WO 98/58124 in view of Roussel et al., WO 99/45205 or Kamps et al., US Patent No. 5,702,571.

Jennings et al. teach a tissue which is calendered and embossed, see abstract. They teach that the tissue is transported to a calendering unit that define a nip at a lineal pressure between 30 to 200 PLI, (52.5-350.25 N/cm), see page 9, lines 3-4, transported to an embossing unit comprising a pattern roll and a backing roll and then wound into a core and subsequently cut into appropriate widths, pages 8-10. In page 10, Jennings et al. teach that the embossing unit comprises a backing roll comprising a smooth rubber covered surface and a hard roll, a steel roll. Jennings et al. is silent with regard to the

number of embossing elements as claimed. However, Roussel et al. and Kamps et al., teach micro-embossing systems in which a tissue is embossed with an embossing device having at least 30 embossing elements /cm², see abstracts. They teach that the advantages of using such mechanism, device, are: produces a softer tissue, improved feel and good mechanical strength see abstract of Roussel et al. and Kamps et al., abstract. Therefore, using a device as taught by Roussel et al or Kamps et al. would have been obvious to one of ordinary skill in the art in order to obtain the advantages discussed above. As to the use of a lotion¹, the use of lotions, emollients and other additives in tissues is conventional in the art and therefore, the use of lotion would have been obvious to one of ordinary skill in the art. Note that Kamps et al., teach the same range of heights of the elements, see above and therefore it would have been obvious to one of ordinary skill in the art to use the height of the elements as suggested by Kamps et al. in order to obtain the benefits indicated above, e.g., obtaining a premium quality tissue.

Response to Arguments

8. Applicant's arguments with respect to claims 1-3 and 5-12 in view of Wells have been considered but are moot in view of the new ground(s) of rejection.

9. Applicant's arguments filed on October 27, 2006 regarding the 103(a) rejection over WO 98/58124 have been fully considered but they are not persuasive.

Applicants argue that the reference does not teach the lineal pressure at the calender as it is now claimed. This is unconvincing, because the reference explicitly teaches that the

¹ See for example US Patent No. 5,990,377 to Chen et al. or US Patent No. 6,352,700 to Luu et al., just to mention a couple.

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lineal pressure at the calender could be between 30-200 lb_f/in, which converts to (52.53-350.25 N/cm), which falls within the claimed range.


Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure in the art of "Embossed- Calendered tissues."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to José A. Fortuna whose telephone number is 571-272-1188. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


José A Fortuna
Primary Examiner
Art Unit 1731

JAF